

# United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/523,511	02/04/2005	Kouichi Sakajiri	101621-11	1306	
27387 75	12/15/2006		EXAM	INER	
NORRIS, MCLAUGHLIN & MARCUS, P.A.			GRAY,	GRAY, JILL M	
875 THIRD AV 18TH FLOOR	E .	·	ART UNIT	PAPER NUMBER	
NEW YORK,	NY 10022		1774	-	
			DATÉ MAILED: 12/15/2000	· ·	

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)				
	10/523,511	SAKAJIRI ET AL.				
Office Action Summary	Examiner	Art Unit				
	Jill M. Gray	1774				
The MAILING DATE of this communication Period for Reply	n appears on the cover sheet wit	th the correspondence address				
A SHORTENED STATUTORY PERIOD FOR R WHICHEVER IS LONGER, FROM THE MAILIN  - Extensions of time may be available under the provisions of 37 C after SIX (6) MONTHS from the mailing date of this communication  - If NO period for reply is specified above, the maximum statutory provided to reply within the set or extended period for reply will, by Any reply received by the Office later than three months after the earned patent term adjustment. See 37 CFR 1.704(b).	IG DATE OF THIS COMMUNIC FR 1.136(a). In no event, however, may a re on. period will apply and will expire SIX (6) MONT statute, cause the application to become ABA	CATION.  uply be timely filed  ITHS from the mailing date of this communication.  ANDONED (35 U.S.C. § 133).				
Status						
1) Responsive to communication(s) filed on	<u>21 September 2006</u> .	·				
2a)☐ This action is <b>FINAL</b> . 2b)⊠	This action is <b>FINAL</b> . 2b)⊠ This action is non-final.					
·	3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is					
closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.						
Disposition of Claims						
4) ☐ Claim(s) <u>1-6</u> is/are pending in the applicate 4a) Of the above claim(s) is/are with 5) ☐ Claim(s) is/are allowed.  6) ☐ Claim(s) <u>1-6</u> is/are rejected.  7) ☐ Claim(s) is/are objected to.  8) ☐ Claim(s) are subject to restriction as	hdrawn from consideration.					
Application Papers						
9) The specification is objected to by the Exa  10) The drawing(s) filed on is/are: a)  Applicant may not request that any objection to  Replacement drawing sheet(s) including the co  11) The oath or declaration is objected to by the	accepted or b) objected to be the drawing(s) be held in abeyand brrection is required if the drawing(s	ce. See 37 CFR 1.85(a). s) is objected to. See 37 CFR 1.121(d).				
Priority under 35 U.S.C. § 119						
<ul> <li>12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).</li> <li>a) All b) Some * c) None of:</li> <li>1. Certified copies of the priority documents have been received.</li> <li>2. Certified copies of the priority documents have been received in Application No.</li> <li>3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).</li> <li>* See the attached detailed Office action for a list of the certified copies not received.</li> </ul>						
Attachment(s)  1) Notice of References Cited (PTO-892)  2) Notice of Draftsperson's Patent Drawing Review (PTO-946)  3) Information Disclosure Statement(s) (PTO/SB/08)	8) Paper No(s)	ummary (PTO-413) /Mail Date formal Patent Application				
Paper No(s)/Mail Date	6) Other:					

Application/Control Number: 10/523,511

Art Unit: 1774

#### **DETAILED ACTION**

# Claim Rejections - 35 USC § 102

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

## Claim Rejections - 35 USC § 103

- 2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
- 3. Claims 1-5 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ogawa et al, 4,420,512 (Ogawa).

Ogawa is as set forth in the previous Office Action, but is silent as to the specific properties after heat treatment. In this concern, Ogawa teaches that the sizing agent comprises two epoxy resins and has a viscosity essentially as claimed by applicants, further teaching that his composition can contain a block copolymer of the type contemplated by applicants. Accordingly, the examiner has reason to believe that the properties of the resultant fiber are the same as well, in the absence of factual evidence to the contrary.

4. Claims 1-2 and 4-5 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ogawa et al, 5,167,945 (Ogawa).

Ogawa is as set forth in the previous Office Action, but is silent as to the specific properties after heat treatment. In this concern, Ogawa teaches that the sizing agent comprises two epoxy resins and has a viscosity essentially as claimed by applicants,

Application/Control Number: 10/523,511

Art Unit: 1774

further teaching that his composition can contain a block copolymer of the type contemplated by applicants. Accordingly, the examiner has reason to believe that the properties of the resultant fiber are the same as well, in the absence of factual evidence to the contrary.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa et al, 4,420,512 and 5,167,945, as applied above to claims 1-5, each in view of Kobayashi et al, 6,368,712 B1 (Kobayashi). Ogawa '512 and '945 are referred to collectively as Ogawa.

Ogawa is as set forth previously but does not teach the surface oxygen concentration. Kobayashi teaches carbon fibers sized with a sizing agent. In addition, Kobayashi teaches that high adhesion properties can be obtained in composite materials when the carbon fibers have a surface oxygen concentration O/C ratio of 0.02 to 0.3. It would have been obvious to modify the surfaces of the carbon fibers of Ogawa to an O/C ratio within the present claimed range and as taught by Kobayashi in order to obtain high adhesion properties in the composite material.

Therefore, the combined teachings of Ogawa ('512 and '945) and Kobayashi would have rendered obvious the invention as claimed in present claim 6.

### Response to Arguments

6. Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 1774

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill M. Gray whose telephone number is 571-272-1524. The examiner can normally be reached on M-Th and alternate Fridays 10:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Frimary Examiner

jmg